

PHSC 3223 Introduction to Atmospheric Science

Department of Physics, Brailsford College of Arts and Sciences

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OFFICE HOURS: Tues. and Thurs. 1pm – 3pm

VIRTUAL OFFICE HOURS (WHEN I CHECK E-MAIL):
Mon. thru Fri. 9am – 11am, 1pm – 3pm

COURSE LOCATION: E. E. O'Banion Science Building, Room 322

CLASS MEETING DAYS AND TIMES: Tues. and Thurs. 3:30pm – 4:50pm

TEXTBOOK: RECOMMENDED-ISBNs for 2010-11 (All © 2009 AMS except as noted)

Title	10-Digit	13-Digit	2010 Price
Weather Studies - Textbook and Investigations Manual 4 th Ed.	1-878220-93-4	978-1-878220-93-6	\$125

PREREQUISITES: PHSC 2103 or PHYS 2123 or PHYS 2523

ACCESS TO LEARNING RESOURCES:

AMS Online Weather Studies Website

Login Page: <http://www.ametsoc.org/amsedu/login.cfm>

(Login information will be given separately in class)

PVAMU Library:

phone: (936) 261-1500;

web: <http://www.tamu.edu/pvamu/library/>

University Bookstore:

phone: (936) 261-1990;

web: <https://www.bkstr.com/Home/10001-10734-1?demoKey=d>

COURSE GOALS: This course is based on the *Online Weather Studies* course written by the American Meteorological Society and incorporates its textbook materials. The structure and changes in the atmosphere are studied as well as weather patterns and climate changes. The main goals of this course include a thorough introduction to weather and climate, a look at how the various physical sciences (e.g. physics, chemistry, oceanography, astronomy, etc.) interrelate to one another in the field of atmospheric sciences, and experience in critical thinking as it relates to the sciences and its importance in everyday life.

COURSE OUTCOMES: The student should be able to gain an understanding of how weather and climate work, how weather maps are read and interpreted, how forecasts are produced, as well as an appreciation that the physical sciences are not separate and compartmentalized, but overlap, interact, and work together to produce the phenomena we see in the everyday world. In addition, the student should have some practical experience in the skills of critical thinking and how this relates to science and everyday life.

COURSE EVALUATION METHODS:

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course:

Exams – written tests designed to measure knowledge of presented course material, 100 pts for two exams and 150 pts for final. In addition, there will be two in-class quizzes at 20 pts each

Exercises – written assignments designed to supplement and reinforce course material: investigations at 20 points each and in-class critical thinking exercises at 10 points each

Projects – assignments designed to measure ability to apply presented course material. This will take the form of two in-class presentations, 15 pts each.

Class Participation – daily attendance and participation in class discussions, 20 pts

Instrument	Value (points & percentages)	Total
Assignments-Current Weather Studies	10 assignments at 20 points each (27% course grade)	200
Critical Thinking Exercises	8 assignments at 10 points each (10% course grade)	80
In-class Oral Presentations	2 exercises at 15 points each (4% course grade)	30
Term Paper	1 paper at 30 points (4% course grade)	30
Quizzes	2 quizzes at 20 points each (5% course grade)	40
In Class Exams (2)	100 points (27% course grade)	200
Class Participation/ Discussion	20 points (3% of course grade)	20
Final Exam	150 points (20% of course grade)	150
Total:		750

Makeup exams, makeup quizzes and in class activities will be given only for university-approved absences verified in writing. Homework is to be turned in on time; no late homework will be accepted unless circumstances warrant. As mentioned above, there will be a variety of elements used in determining the final grade for this course. Reading assignments will be given regularly; it is important to keep up with them, as they will help to enhance the in class experience as well as your experience on the exams.

The grading system is as follows:

- A 90 – 100% (675 to 750 points)
- B 80 – 89% (600 to 674 points)

- C 70 – 79% (525 to 599 points)
- D 60 – 69% (450 to 524 points)
- F 0 – 59% (0 to 449 points)

ATTENDANCE POLICY: Class will start and end on time as indicated in the schedule above. Attendance at every class is expected and is each student’s responsibility-it is also imperative that you be on time as much as it is possible. Absence or tardiness, accumulated from day 1, may result in lowered grades; excessive absenteeism, whether EXCUSED or UNEXCUSED, may result in a student’s course grade being reduced or assignment of a grade of “F”.

A TENTATIVE OUTLINE OF THE SEMESTER’S ACTIVITIES IN PHSC 3223:

Week of	Chapter	Weather Topic	Other Events
1, Jan. 18	1	Intro. to course, Monitoring the Weather	Syllabus, schedules, and homework lists distributed
2, Jan. 25	13	Weather Analysis and Forecasting	none
3, Feb. 1	14	Atmospheric Optics	Introduction to Critical Thinking
4, Feb. 8	2	Atmosphere: Origin, Composition, & Structure	Quiz #1
5, Feb. 15	3	Solar & Terrestrial Radiation,	none
6, Feb. 22	4	Heat, Temperature, & Atmospheric Circulation	Exam I, In class presentations I
7, Mar. 1	5	Air Pressure	none
8, Mar. 8	6	Humidity, Saturation, & Stability	none
Mar. 15	--	Spring Break	No Classes
9, Mar. 22	7	Clouds, Precipitation, & Weather Radar	none
10, Mar. 29	8	Wind & Weather, Exam II	Exam II, In class presentations II
11, Apr. 5	9	The Atmosphere’s Planetary Circulation	none
12, Apr. 12	10	Air Masses, Fronts, Cyclones, & Anticyclones	Quiz #2
13, Apr. 19	11,12	Thunderstorms & Tornadoes, Hurricanes	In class paper summaries
14, Apr. 26	15	Climate, & Climate Change /	none
15, May 3	--	Review for Final Examinations	Paper due 5/3
16, May 10	--	Final Exam	None

NOTE: This schedule is tentative. The “Week of” listing gives the date of the Tuesday classes.

UNIVERSITY RULES AND PROCEDURES:

Disability statement (See Student Handbook):

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):

Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy:

Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class. It is also imperative that you be on time as much as it is possible. You can find more details in the University Undergraduate Catalog (2005 – 2007, p.111).

Student Academic Appeals Process

Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.